

**REMARKS**

The present invention relates to a method for manufacturing bleached mechanical and chemithermomechanical pulp.

In the Office Action dated July 19, 2004, claims 1-13 were rejected, for two basic reasons.

First, claims 1-13 were rejected under 35 U.S.C. § 112, first paragraph, with respect to the recitation in claim 1 referring to “at least one refiner”; that is, the Examiner has taken the position that the terminology “at least one” is broader than the disclosed one or two refiners. The Examiner also referred to certain terminology regarding the further stages in which reductive bleaching agent is the only bleaching agent and unclearness of the recitation. In this regard, the Examiner suggested inserting a semicolon (;) after the recitation regarding the further stages.

In response to the § 112 issues raised by the Examiner, claim 1 has been amended herein, including: (1) to refer to one refiner or two refiners, (2) to refer to the finished bleached product, and (3) a semicolon (;) has been inserted after the term “stages” at line 10 of claim 1.

Accordingly, Applicants’ respectfully submit that the reasons for rejection under 35 U.S.C. § 112 have been overcome.

The second basis for rejection of claims 1-13 was under 35 U.S.C. § 103(a), based on alleged admitted prior art (based on use of the Jepson claim format) in view of Madison and Grimsley and West. A rationale for alleging the obvious combination of the art to derive the present invention was stated at page 3 of the Office Action.

Applicants respectfully traverse the § 103(a) rejection, for several reasons, as explained below.

Although the Examiner has correctly cited MPEP 2129 III with respect to the matter of admitted prior art generally, it is respectfully submitted that the further analysis finding further features necessary to derive the present invention is defective.

First, although the Examiner has indicated an impression that Madison et al teaches the bleaching of mechanical pulp in a process similar to the admitted prior art, in truth, the Madison reference has almost nothing to do with the admitted prior art, and does not provide an appropriate basis for derivation of the presently claimed invention.

Comparing the recitation of present independent claim 1, for example, with the disclosure of the Madison reference, it is quite clear to any person skilled in the art that the required features recited in amended claim 1 do not find basis in the Madison et al reference (e.g., refer to the description of the process of Madison in claim 1 thereof).

That is, there is a substantial difference between the pulp manufacturing process of Madison vis-a-vis the pulp manufacturing method of the present invention.

Madison starts with wood in the form of logs which are ground in a stone grinder by which a ground wood pulp suspension is formed. That is, the main fiber-freelaying process of Madison is grinding.

On the other hand, the method of the present invention starts with wood in the form of chips. These chips are fiber-freelayed by, as presently recited, one refiner or two refiners, in a

single refining stage, and a refining mechanical pulp (CTMP) suspension is formed. Therefore, the only fiber-freelayed technique in the method of the present invention is refining.

The first pulp suspension of Madison is very coarse and therefore it is necessary to treat the pulp suspension (observe not the wood) in two further refining stages. However, before the first refining stage it is necessary to add caustic soda (NaOH) to the pulp suspension and to give the possibility for the added chemical to react during a certain period of time, more precisely somewhere between 4 and 30 minutes. After the first refining stage the pulp suspension is stored for 20 to 60 minutes. After that the second refining stage is carried out on the washed pulp suspension. It is important for the process of Madison that the coarseness of the pulp suspension drops from the initial CSF-value of 500 to 750 to 300 to 400 after the first refining stage, and to 100 to 200 after the second refining stage. The important parts and details of the pulp manufacturing process of Madison are described above, from which it is seen to differ more or less completely from the present inventive method of manufacturing bleached mechanical or chemithermomechanical pulp, when considered in their totalities. Therefore, there is no true technical ground for stating that Madison et al teaches the bleaching of mechanical pulp in a process similar to the admitted prior art.

When talking about the bleaching of the pulp, which is a very important part of the present inventive method for manufacturing a bleached pulp of a certain kind, which differs from the kind or type of pulp which Madison manufactures, the truth is that according to Madison it is not necessary to bleach the pulp at all. Regarding chemical treatment of the pulp, the only important thing according to Madison is that sodium hydroxide is added to the pulp, in a certain

amount and in a certain position. It is correct that the pulp can be bleached according to Madison. If the pulp is bleached, the bleaching is carried out with peroxides and/or hydrosulfites. Nothing is mentioned in Madison to indicate that it must be a reductive bleaching agent.

Based on the Examiner's comments regarding the foregoing, wherein the Examiner refers to the bleaching agent being added between the last refiner and "the screen", it appears that the Examiner has not appreciated some of the significant differences between the present invention and Madison. For instance, in the flow sheet, on the first page of the Madison reference, there are shown two screening stages.

One screening stage is situated early in the pulp manufacturing process and can in some way be compared with the screening stage in the present inventive method. The other screening stage in Madison is situated late in the pulp manufacturing process. It appears that when the Examiner refers to "the screening stage", he has chosen the second screening stage, only for the reason that this stage fits in a linguistic way with the statement "secondary refiner"; that is, there is no technical reason or support for picking out the second screening stage in Madison as "the screening stage".

Further considering the proposed combination of multiple references that the Examiner has cited as a basis for asserting the obviousness of presently claimed invention, Applicants also traverse for the reason that not only does Madison have nothing in common with the method of the present invention in accordance with claim 1, as noted above, but it is further not possible to see any technical reason that would occur to one skilled in the art for combining Madison with

Grimsley as proposed by the Examiner. In this regard, the Examiner's attention is directed to the discussion of Grimsley at the upper portion of page 12 of the Second Preliminary Amendment filed February 27, 2002.

Lastly, with respect to the Examiner's reliance upon the West reference in combination with the other references, the West reference also has been previously discussed in the noted February 27<sup>th</sup> Amendment, at the bottom of page 12 and the first paragraph of page 13.

However, further with respect to the West reference, Applicants note that the Examiner's characterization as to what are "drastic conditions" in accordance with the West reference versus drastic conditions in accordance with the present invention are not necessarily the same, and rather, the conditions of West, with a temperature of up to 100°C, would appear to be too drastic.

Lastly, one further point with respect to the West patent (U.S. Patent 3,467,574, issued September 16, 1969) that must be considered is "If it would have been so obvious to add a reductive bleaching agent directly to the pulp suspension as asserted by the Examiner in the present rejection, why have over thirty years passed since West issued with no one having done so"?

For all of the foregoing reasons, Applicants respectfully submit that the claims 1-13 as amended herein and as are now pending in the application are unobvious and are patentable over the cited combination of four (4) prior art sources.


Accordingly, withdrawal of the rejection and allowance of claims 1-13 is earnestly solicited.

AMENDMENT UNDER 37 C.F.R. § 1.111  
U.S. Patent No. 09/914,650

If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned attorney at the local Washington, D.C. telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

  
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